

REMARKS

In the Office Action dated November 18, 2005, claims 1-6, 9, 10, 17, 18, 20-26, and 33-35 were rejected under 35 U.S.C. § 103 over U.S. Patent Application Publication No. 2002/0134552 (Moss) in view of WO 83/02798 (Galerie); claims 7 and 19 were rejected under § 103 over Moss in view of Galerie and U.S. Patent No. 6,209,634 (Avakov); claims 8 and 27 were rejected under § 103 over Moss in view of Galerie and U.S. Patent No. 5,657,823 (Kogure); claims 11 and 12 were rejected under § 103 over Moss in view of Galerie and U.S. Patent No. 5,676,209 (Reynolds); claims 15, 16, and 29 were rejected under § 103 over Moss in view of Galerie and U.S. Patent No. 6,125,080 (Sonnenschein); and claims 30-32 were rejected under § 103 over Moss in view of Kogure.

Claim 1 recites a carrier line spool having a carrier line that is adapted to be positioned underwater, and a stack in a structure separate from the carrier line spool, the stack to operatively couple to subsea wellhead equipment, and the carrier line attached to the stack, the stack having equipment to lower the carrier line into the subsea well.

As conceded by the Office Action, Moss does not disclose the carrier line spool being separate from the stack. 11/18/2005 Office Action at 2. However, the Office Action cited Galerie as disclosing a reel 39 for a *high-pressure hose 25* that is located subsea. *Id.* It is respectfully submitted that a *prima facie* case of obviousness has not been established for at least two reasons: (1) no motivation or suggestion existed to combine the teachings of Moss and Galerie; and (2) even if combined, Moss and Galerie do not each or suggest all elements of claim 1. *See* M.P.E.P. § 2143 (8th ed., Rev. 3), at 2100-135.

Obviousness cannot be established by combining teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1096 (Fed. Cir. 1988). The hose 25 of Galerie is a high-pressure hydraulic hose for activating a blowout preventer. Galerie, 6:1-4. The outlet of the hose 25 is connected to the blowout preventer through a valve 31 and fitting 33. Galerie, 6:5-7. In other words, what is disclosed in Galerie is use of a reel 39 to provide a hose 25 that is attached to a blowout preventer for delivering hydraulic pressure for activating the blowout preventer. There is no suggestion whatsoever by Galerie of a carrier line spool having a carrier line, where the carrier line spool is separate from the stack adapted to operatively couple to

subsea wellhead equipment, and where the stack has equipment to lower the carrier line into the subsea well. All Galerne would have suggested to a person of ordinary skill in the art is that a high-pressure hydraulic hose 25 can be attached to a blowout preventer from an underwater reel 39 for activating the blowout preventer. The high-pressure hydraulic hose 25 of Galerne is completely different from the coiled tubing/wireline 21 depicted in Fig. 2 of Moss. Therefore, Galerne would not have suggested a modification of Moss to achieve the combination of the carrier line spool and stack of claim 1.

Moreover, the hypothetical combination of Moss and Galerne does not teach or suggest all elements of claim 1. Moss teaches a carrier line spool that is part of (*not separate from*) a stack attached to subsea wellhead equipment. Galerne teaches attaching a high-pressure hydraulic hose from an underwater reel to a blowout preventer, not a carrier line that can be lowered into the subsea well. Thus, the hypothetical combination of Moss and Galerne clearly does not teach or suggest the combination of the carrier line spool and separate stack as recited in claim 1.

In view of the foregoing, it is respectfully submitted that a *prima facie* case of obviousness cannot be established with respect to claim 1 in view of Moss and Galerne.

Independent claims 17 and 24 are similarly allowable over the asserted combination of Moss and Galerne.

Independent claim 15 was rejected as being obvious over Moss, Galerne, and Sonnenschein. Claim 15 recites an apparatus that has an underwater marine unit adapted to operatively couple the carrier line (part of a carrier line spool) to intervention equipment attached to subsea wellhead equipment, in response to wireless signals.

A first point of error in the obviousness rejection is that in view of the fact that no motivation or suggestion existed to combine Moss and Galerne, there also did not exist any motivation or suggestion to combine Moss, Galerne, and Sonnenschein.

The Office Action conceded that Moss in view of Galerne does “not disclose that the ROV is controlled through wireless acoustic wave signals.” 11/18/2005 Office Action at 4. Note that the Office Action did not properly construe the exact words of claim 15, which recites an underwater marine unit adapted to operatively couple the carrier line to the intervention equipment attached to the subsea wellhead equipment in response to wireless signals. Applicant

will construe the Office Action's concession that Moss in view of Galerne does not disclose that the ROV is controlled through wireless acoustic wave signals as a concession that Moss in view of Galerne does not disclose an underwater marine unit adapted to operatively couple the carrier line to the intervention equipment attached to the subsea wellhead equipment in response to wireless signals.

As taught by Moss, a "standard" remote operated vehicle (ROV) is provided in which an umbilical is used for controlling an intervention system. Moss, ¶¶ [0015], [0017]. In contrast, Sonnenschein is focused on underwater wireless communications using personal devices carried by a diver. Sonnenschein, 6:24-35. Sonnenschein does mention in passing that the communications techniques for personal devices can be modified for underwater ROVs and AUVs. Sonnenschein, 13:48-56. However, there is no suggestion in this passage, or anywhere else within Sonnenschein, of modifying the teachings of Moss and Galerne to provide an underwater marine unit that operatively couples the carrier line to intervention equipment attached to subsea wellhead equipment *in response to wireless signals*. In fact, the focus of Sonnenschein is to provide a "reliable system which provides communication between *divers*, or more specifically, a paging system for transferring personal messages in a network of two or more divers." Sonnenschein, 1:66-2:3.

The Office Action stated that "[i]t is common knowledge within the art of communications that the use of wireless technology is desirable." 11/18/2005 Office Action at 5. However, knowledge in the art regarding the use of wireless technology does not provide the requisite suggestion to modify Moss and Galerne in the manner proposed by the Office Action. A person of ordinary skill in the art looking to the teachings of Sonnenschein would have been taught that underwater wireless communications between divers is possible, and that such wireless communications can be used for remote control of underwater vehicles. However, such a person of ordinary skill in the art would not have been motivated to modify Moss and Galerne to provide the claimed subject matter, namely an underwater marine unit adapted to operatively couple the carrier line to the intervention equipment attached to the subsea wellhead equipment in response to wireless signals.

As previously noted, the Office Action has merely engaged in picking and choosing selected items from prior art references based on impermissible hindsight, where no motivation

or suggestion existed to combine such teachings. Therefore, it is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 15.

Independent claim 29 is allowable over the cited references for similar reasons as claim 15.

Independent claim 30 was rejected as being obvious over Moss and Kogure. The Office Action conceded that Moss fails to disclose attaching one or more buoyancy tanks to at least one of the modules containing intervention equipment. 11/18/2005 Office Action at 4. However, reliance was made on Kogure as teaching this feature. *Id.*

As stated in Moss, a goal of its proposed invention is the elimination of a riser to the surface. Moss, ¶¶ [0012]-[0013]. On the other hand, Kogure is directed to a riser that includes a riser stabilizing system and supplementary buoyancy tanks fixedly positioned to the upper end of the riser 16. Kogure, 3:14-18; 3:25-26, 4:31-33. Thus, while Moss teaches the elimination of a riser, Kogure teaches the exact opposite -- a specific type of riser with equipment to support ease of use of the riser. Combining the teachings of Moss and Kogure would defeat the goals and objective of both references. A basic requirement of establishing a *prima facie* case of obviousness is that a proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. *Id.*, § 2143.01, at 2100-137. Therefore, there can be no motivation or suggestion to combine the teachings of Kogure and Moss.

The Office Action stated that the teachings of Kogure regarding a riser and riser stabilization system can be ignored, and that “the only portion of the Kogure et al. document that needs to be considered is the buoyancy tanks.” 11/18/2005 Office Action at 5. Ignoring significant parts of the teachings of Kogure and Moss to provide the obviousness rejection based on Moss and Kogure is error. As stated by the M.P.E.P., a prior art reference “must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” M.P.E.P. § 2141.02, at 2100-132.

A person of ordinary skill in the art would have been led by Kogure to use buoyancy tanks with a riser, which is specifically at odds with the teachings of Moss regarding the elimination of a riser. Therefore, this is objective evidence that a person of ordinary skill in the art would not have been motivated to combine the teachings of Moss and Kogure in the manner

proposed by the Office Action. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 30.

Dependent claims are allowable for at least the same reasons as corresponding independent claims. Moreover, in view of the defective obviousness rejections of base claims 1-5 over Moss and Galerne, it is respectfully submitted that the obviousness rejections of dependent claims 7, 8, 11, and 12 over Moss, Galerne, and other references have also been overcome.

Similarly, in view of the defective obviousness rejection of base claims 17 and 18 over Moss and Galerne, it is respectfully submitted that the obviousness rejection of claim 19 over Moss, Galerne, and Avakov have been overcome. Also, in view of the defective obviousness rejection of base claims 24-26 over Moss and Galerne, the obviousness rejection of dependent claim 27 over Moss, Galerne, and Kogure has been overcome.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (SHL.0099C1US).

Respectfully submitted,

Date: _____

Feb 13, 2006



Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
8554 Katy Freeway, Suite 100
Houston, TX 77024
Telephone: (713) 468-8880
Facsimile: (713) 468-8883